

ANHYDROUS AMMONIA

SAFETY

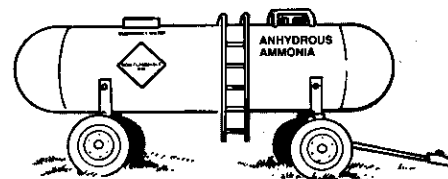
NH₃ DETAILS FOR DEALERS



Plant & Operator Responsibilities

- ✓ Develop "Site Specific Safety Plan" which includes emergency, maintenance and troubleshooting procedures
- ✓ Galvanized pipe is NOT to be used for anhydrous NH₃ service...even for temporary repairs
- ✓ Identify "sign off" on material manifest before accepting delivery
- ✓ Unloading lines MUST be compatible for NH₃ service
- ✓ Be sure unloading lines are attached and secure
- ✓ Be available during unloading to initiate emergency plans
- ✓ Properly disconnect and secure plant valves following unloading
- ✓ Set up inspection and testing procedures to be applied to ALL storage tanks
- ✓ Equipment should:
 - be additives compatible
 - meet NH₃ codes and standards
- ✓ Any equipment replacement MUST be made "IN KIND"
 - same materials of construction
 - same specifications

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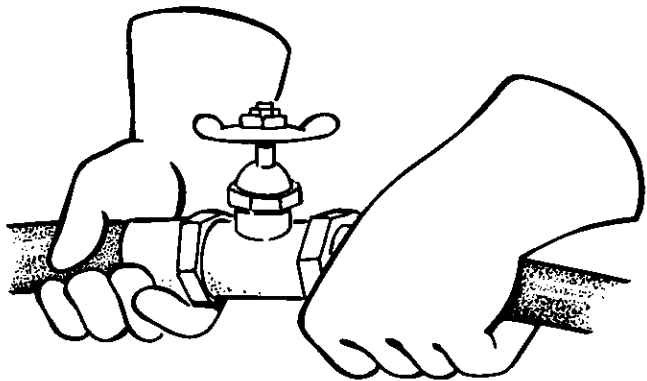
Hose Maintenance

- Unloading hoses must meet same 5 year replacement criteria as facility transfer tanks
- Stainless steel hoses are recommended for nurse tank risers

Tank Procedures

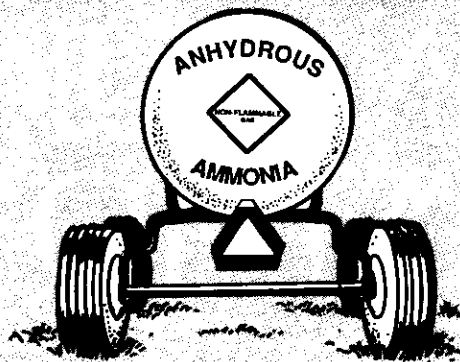
- Nurse tank contents SHOULD NOT be transferred back to storage tank
- Nurse tank cutting or welding is ONLY to be done by a certified welder with R-stamp or U-stamp, or equivalent...if baffle is detached...remove tank from service
- A 5 gallon container of clean and easily accessible water MUST be mounted to the nurse tank
- Multiple water sources should be available

ANHYDROUS AMMONIA SAFETY



Valve Operation

- ✓ Opening control valves too quickly may cause excess flow valves to shut.
- ✓ Manual valves are to be opened WIDE when transferring liquid ammonia from tank car to storage tank
- ✓ Relief valves must be stamped with replacement date
- ✓ Take extra caution when using additives in fill valves to minimize corrosion
 - Flush with additive-free ammonia, or
 - Add small amount of lubricating oil after additive
- ✓ Applicator valves on top of tank should be protected by rollover cage...a strap-on design rollover cage should be considered for upgrading applicator tanks



VEHICLE TOWING

! Towing vehicles should be of adequate size to handle loaded trailer.

! Each towed trailer should have two (2) safety chains attached...adequately sized and criss-crossed to support the tongue.

! Securely locked hitch pins designed for service.

This bulletin was produced at the University of Missouri - Columbia in coordination with the National Institute for Occupational Safety and Health, Centers for Disease Control.

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This is only a synopsis of anhydrous ammonia safety information. For detailed information, contact your local Cooperative Extension office or agrichemical dealer.